THE GENERAL ENVIRONMENT

PHYSICAL SETTING

In Pliocene times, the land which is now Lebanon was submerged under the [1.1]
seas, were "Syrian Coast" whose waters washed the shores of two newly
formed lands of "Gondwanaland." These lands are now Arabia and Egypt.
From early Cretaceous to late Pliocene times, tremendous deposits of the remains
of marine fauna were laid down on the floor of the ocean. The period of deposition
was followed by a period of uplift during which the ocean floor was raised three
miles of feet above the level of the sea which is now called Mediterranean. Subsequent
faulting and folding completed the creation of the present topography of
the eastern shore of the Mediterranean (Fisher, 1950, pp. 11-12). This consists,
essentially, of two roughly parallel ranges of mountains and hills, divided by a
rift system, which extend from the plain of Homs in Syria to the Gulf of Aqaba
in the Red Sea. This mountain system steadily decreases in altitude from Lebanon
in the north to the Negeb in the south, where it is hardly perceptible.

Mount Lebanon rises abruptly from the sea and attains, at one point, an alti-
tude of over 10,000 feet, maintaining an average of about 6000 feet. There are
fairly extensive coastal plains inland from Sidon and Tyre, in the Koura district
near Tripoli, and, especially, in the Akkar, most of which actually belongs to Syria.
Elsewhere, however, it is often only a matter of technicality to say that there is
any appreciable coastal plain at all, and one of the least favored districts in this
regard is al-Qusair, which is the locus of this study.

The climate of Lebanon is basically the classic, Mediterranean type which [1.2]
features chilly, rainy winters and hot, relatively arid summers. Mt. Lebanon itself affects
a number of modifications in this yearly cycle. The high slopes catch the clouds
which are swept in by the prevailing winter westerlies and force them to drop a
large part of their moisture. As a result, the annual precipitation (min below
about 2000 feet, snow above it) ranges between about twenty and forty inches
(Fisher, 1950, p. 307). Annual averages give a false picture of reality because
the precipitation from year to year is highly variable (Fisher, 1950, p. 30). For
example, in the winter of 1870-71, twenty-two inches fell at Beirut, while in
1931-32, forty-two inches fell. Precipitation is concentrated in the months from
November to April, but within that period it is capricious. It is not unusual to
have one day of cloudbursts immediately followed by one of clear skies. Even in
the wettest month (January), there are only fourteen to seventeen rainy days

(Fisher, 1950, p. 38). From May through October, there is no precipitation at all, except at the beginning and the end of the period.

Along the coast, up to about 1500 feet at least, freezing temperatures in winter are of very rare occurrence, but snow covers the higher slopes continuously during the winter. Patches of it on the summits even defy the burning sun of August.

At Beirut the average summer temperature is 82°F., and it is frequently oppressively humid (Fisher, 1950, p. 42). In el-Qurnet, as in Beirut, there is no snow in winter, but the district is somewhat cooler and less humid than the city in summer.

Lebanon, as a whole, is obviously a well-watered country, but its geological structure has led to an over-abundance of water in some districts and a dearth of it in others. Mt. Lebanon consists, essentially, of two thick layers of Jurassic and Cretaceous limestone, interspersed with a layer of sands and clays. Rain water and snow-melt either run off directly or sink through permeable upper strata to emerge as springs at lower levels, especially at between 3000 and 5000 feet, where their downward seepage is blocked by impermeable strata below (Fisher, 1950, p. 374). The abundance of spring water in high mountain fastnesses is the primary reason for Lebanon's having been so popular as a refuge area for sect groups escaping from persecution.

The drainage system of the country is clearly seen on the map of Lebanon (Fig. 1). The eastern slopes are drained by the large rivers, Litani and Orontes. The western slopes are drained by a series of small rivers whose courses drop from 5000 to 6000 feet to sea level in distances rarely exceeding fifteen miles. The erosion pattern is what one might expect. The small rivers have cut very steep, high banks, nothing less than deep gorges in many cases. Culturally, this is important for at least three reasons: The gorges have made north-south travel very difficult. It has been impossible to use river water for extensive irrigation except, in very recent years, near the mouths of the rivers. The spectacular scenery has added inspiration to the love of the Lebanese for their country, and it attracts many foreign tourists every summer. Water erosion has also created innumerable caves (used both by Stone Age men and later-day troglodytes), a large natural bridge, and at least one horizontal underground river (reported to be the original River Dog) which has not yet been fully explored.

Although the lower slopes are not, as a whole, entirely devoid of springs, and although what horizontal there is is fully exploited, there are districts which have no springs, no local streams, and no alluvial soil. One such district is el-Qurnet. This district is located about half-way between the large urban centers of Beirut and Tripoli, and the main highway and only railroad between these cities goes through it. This route has been used ever since the advent of man in the area, but the present paved highway dates from about 1935, while the railroad was built by the British army in 1942. Also of very recent date are the automobile roads within the district. The road from Beirut to Ghazzeze is paved, and has been

?: Gulick E-S (1952) 1955 ME: Lebanon ME:

in existence about fifteen years. The road from Shuḥāṭa through Munṣif to Ḥāwī has been built since 1945, and the segment between the shrine of Mar Jirjis and Ḥāwī is not yet paved. The road which connects Lower and Upper Bukhata is usable but definitely still under construction. The villagers are very conscious of the fact that their road system is a new phenomenon and that it is as yet incomplete. The automobile roads more or less follow the line of old paths many of which are still used. Although the paving of these is generally too rough for any sort of wheeled vehicle, it is essential for any kind of travel in the muddy rainy season.

It would be a great mistake to deduce from the map (Fig. 2) that the plan of these villages (or of any Lebanese villages) is derived from the roads which pass through them. Middle Eastern villages in general are house-clusters, sometimes approaching the southwestern pueblo in degree of compactness. One finds one's way from house to house by a maze of twisting paths, which become alleyways in the larger towns. The only suggestion of physical planning is the frequent occurrence of an open space, *sāḥa*, where the small shops and the church or mosque tend to be concentrated (Tannous, 1944, p. 328). In the minds of their respective inhabitants, the plan of the Lebanese village is very different from its counterpart in North America, in which the village green, the courthouse square, or Main Street are definitely centers. The new roads in al-Qurnī are recent impositions on the traditional culture. The one which longitudinally bisects Munṣif follows, in part, an old path, but a number of old buildings had to be torn down to make room for it.

We have already seen that al-Qurnī has no ground water resources. All the water which is used in the district is winter rain water which is collected, Bermuda style, from the roofs of the houses and stored in large, semi-subterranean cisterns of which there are a great number. The physical poverty of the district (cf. Thoumin, 1936, p. 129) is due to its geological structure which Fisher has described:

> Your village lies in a limestone area (middle Cretaceous) underlain by a thin bed of impermeable Cretaceous marls, clays and lignite, with Jurassic limestones lower still. A fault at Turāṭ [East of al-Qurnī] has exposed a small amount of the impermeable lignite, so that there is a chance that very deep wells sunk at el Munṣif might reach this horizon. On the whole, though, I am not very sanguine, as I have found around Jmaiṭā and Mazraʿāt-Yashūʿ [South of Jbaiʿ] the fact that intensive cultivation stops when these particular outcrops are reached. Also, there is a break (at Turāṭ) with the main anticline of the mountains, so large springs are ruled out. The sudden change from a great M. of Jmaiṭā from intensive garden cultivation to a sterile garrigue corresponds with the beginning of the limestone-marl outcrops. (W. B. Fisher, Personal Communication, Nov. 13, 1952.)

Before proceeding to a discussion of the flora and fauna of the district, it should be mentioned that at Ḥāwī there *are* two springs. Both, however, are small, and

7: Gulick E-5 (1952) 1955 ME1 Lebanon ME1

Evergreen oaks, which are tolerant of greater aridity, persist,—although at wider intervals than in true maquis—but tall shrubs are much less common, and a low scrub of dwarf bushes and thorns take their place. Because of the more open nature of this vegetation, which rarely exceeds 5 feet in height, perennial plants can develop, and for some weeks after the spring rains, a carpet of flowers and herbs makes a striking display. Garrigue is often discontinuous, with bare patches of soil and rock interspersed with plants. (Fisher, 1950, p. 71.)

Mammalian fauna are very sparse indeed; as a matter of fact, so far as the writer knows, there is virtually none. Snakes, however, are fairly numerous, are all regarded as being poisonous, and are killed on sight. Small lizards, spiders, six-inch centipedes, snails, scorpions, and large, wood-eating beetles are prominent among the other creatures which were observed. Birds are few, probably because those which venture into the district are generally shot, even if they are as small as sparrows. Flies are numerous, and there are some mosquitoes.

THE DISTRICT OF AL-QURNI

Now that its physical characteristics have been described, the question arises, On what basis can al-Qurni be considered to be a distinct district? The name, according to several informants, means "corner," and it is the impression of the writer that it is used primarily only by the inhabitants of the district itself. True, in terms of terrain, it has two features which set it apart from the land immediately surrounding it. It rises particularly sharply and suddenly from the east, and from the south, say from the hamlet of el-Bury, the ridge upon which Rihani and Jiddayil are built looms up definitely higher than the eastern land, from which it is separated by an arroyo, the Wadi Be'idin. These distinctions are, however, rather minor, and, as far as is known, the people themselves do not perceive them. Within al-Qurni there is little of a physical nature to account for its being set apart as a unit. The land is sharply rolling, and the terrain consists, essentially, of three ridges which run roughly at right angles to the shore line. Upon the largest and highest of these, the three northern villages are built. Shaykhan and Munsif are on the second, middle one; and the third has been commented upon above. Such features are typical of most of the coastal zone from Jbeil to Tripoli.

Al-Qurni is not a political entity. It is simply a locality in Kisrawan, one of several districts in the Province of Mount Lebanon which is one of the five provinces into which the Republic is divided. Al-Qurni does contain six political units, each with its elected mayor and council, as well as its own church. These are the villages of Bteboun, Ghazzeun, Shaykhan, Munsif, Jiddayil, and Rihani. Lower Bteboun is merely an adjunct of the village proper. For political purposes, Bukh'ai is part of Ghazzeun. Hibri and 'Ayqbi belong to Munsif. Be'idin is part of Rihani. For other than political purposes, the people consider themselves to be seven, rather than six, villages, separating Bukh'ai from Ghazzeun. Of the seven,

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CONSERVATISM AND CHANGE IN A LEBANESE VILLAGE

John Gulick

499/ THE COASTAL HIGHWAY which connects Beirut and Tripoli
361 winds between the crashing surf of the Mediterranean and the sharply rising slopes of Mount Lebanon. At one point in the journey northward along this road, the traveler may notice before him a ridge which, from the distance, seems to block his way. If, instead of continuing toward Tripoli, the traveler turns off the main highway at the foot of this ridge and, winds his way up the gravel road which climbs its face to the crest, he will find himself at the southern, seaward tip of a roughly semi-circular ring of six small villages. At the center of this ring is a seventh village considerably larger than the others. This village is al-Khaouli.

361 Topographically, the area which is occupied by the seven villages consists
• 155 of three main ridges which project toward the sea in a fanlike fashion, so
157 that the shape of the area is roughly triangular. The ridges are separated by deep, dry swales; in addition there are other minor crests and gullies, so that the over-all terrain is rough and broken. The land itself is notable for the prevalence of limestone outcrops. The natural flora conforms to the type known as "garrigue," which features low, bushy scrub oak and a variety of small, thorny, aromatic plants. It is a landscape which could not inspire very much confidence in the hearts of ordinary farmers, even to Lebanese farmers, whose fortitude and resourcefulness are justly famous, it has presented a serious challenge.

361 But the challenge does not end with hard features as such. An even more
362 serious problem is the lack of ground water. There are, indeed, two springs very close to the shore, but both are small and one is brackish. All the water used in the area in winter rain water drained off the roofs of the houses and stored in large underground cisterns, of which there are a very large number. This supply must provide for all the needs of the inhabitants for the entire year. The manner which can be devoted to watering plants is therefore extremely limited, and irrigation, in the sense generally applied in the West, is impossible. Another problem of [illegible]

49 * [illegible] college. This article is a brief report of a community study which he made in Lebanon from January to July, 1951, under the direction of the Department of Anthropology of Harvard University. He is the author of "The Lebanese Village: An Introductory Analysis" (unpublished, ms. in Harper vault), which deals with certain technical aspects of Lebanese village social structure.

SYRIA MOD
Lebanese mod

Chapter Ten

SYRIA AND LEBANON

The Land and the People

The area of the present Syria and Lebanon lies to the north of Arabian Deserts and in the western horn of the Fertile Crescent. The two republics do not enclose within their boundaries a natural geographic entity and their climate and topography are best studied in relation to the surrounding countries,[1] but within the political boundaries of the two states, the following geographical divisions may roughly be distinguished:

(1) *The Coastal Strip.* This is about twenty miles wide near Latakia and rather less just north of Tripoli, but in some places disappears and the mountains meet the sea. Olives, bananas, citrus, and vegetables are cultivated intensively near Beirut.

(2) *The Mountains.* Starting from the north, the first coastal mountains are the Jebel Ansairiya (also known as the Alawi Mountains) which average 5,000 feet and are well populated on the western slopes. To the south is the Homs-Tripoli gap and then starts the Lebanon range with peaks of over 10,000 feet. Even on the upper slopes of this range water is plentiful, there is close cultivation, and the villages and towns are prosperous. Near Beirut are situated the mountain resorts to which many of the city workers move each night when the summer brings its humid heat. The interior ranges of mountains lying parallel to that of the Lebanon are the Anti-Lebanon (between Homs and Zahle) reaching over 7,000 feet and the range of Hermon (between Zahle and the Israel border) which reaches 9,000 feet. Water and cultivation are far less plentiful on these than on the coastal mountains. Further inland still and to the south of Damascus lie the Leja, a black area of igneous rock, and the Jebel Druze, which reaches 5,000–6,000 feet and lies north of the Jordan border.

(3) *Plains and Plateaux.* Hardly any of the territory of Syria and Lebanon lies less than 500 feet above sea-level and south of Homs almost all the land is over 1,500 feet. The richest agricultural land is on fairly high ground and forms part of a

[1] See W. B. Fisher, *The Middle East*, a Physical, Social and Regional Geography (London, Methuen, 1950).

SYRIA AND LEBANON

crescent which (starting from the Iraqi border) comprises the Jezira, the countryside of Aleppo, Hama, and Homs, and the fertile and beautiful Bekaa valley. The cultivation of cotton and cereals is particularly successful in the north-eastern corner of Syria where there has been great general development in the last five or six years. From Homs one road leads south to the Bekaa valley which continues between the two mountain ranges of Lebanon and Anti-Lebanon, past Zahle to the southern border of Lebanon. Further inland is the road to Damascus which passes to the east of the Anti-Lebanon over the Qalamun plateau. This is mostly barren land, reaching over 4,000 feet; the areas of cultivation usually need more water, but suffer occasionally from bad floods. The oasis of Damascus is known as the Ghouta and there every drop of water in the two rivers is made use of, by an ancient system of canals which follow the contours and provide water lavishly as they gradually lose height. Between Damascus and Jordan lies the Hauran plateau much of which is about 2,000 feet above sea-level; here there is cultivation of cereals but few trees are now left and there is insufficient water to ensure good crops each year.

(c) *The Desert.* To the south and to the east of the Fertile Crescent there spreads a desert that extends southward for over

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Lebanon MEI

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twenty degrees of latitude. The desert in Syria is of rock and gravel more than of sand, and there are hills rising above 3,000 feet both north and south of Palmyra; more than a third of the total area of Syria is steppe or desert.

Rivers

The Orontes flows from the northern part of the Beqaa through the lake of Homs (which holds about 280 million cubic yards of water) to Homs and through the Ghab depression to Turkey. The Litani rises not far from the Orontes but flows at first southward and later west through a deep gorge in the Lebanon mountains into the sea between Tyre and Sidon. The Euphrates runs through Syria for about 450 miles and has, as tributaries from the north, the Balikh and the Khabur. It is on the Euphrates and its tributaries that there is the best prospect of developing hydro-electricity and irrigation.

Climate[1]

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Over this diverse scene the temperatures vary in the year from below freezing to above 100°F., and on the same day it is possible to ski near the cedars of Lebanon and swim in the sea at Beirut. The rain, which in most places comes between November and February, varies from almost nothing in the desert to about 40 inches a year in the mountains. In the coastal strip the winters are not severe but there is high humidity and small diurnal variation in the summer and this makes the season seem unpleasant and prolonged. In the mountains the snow lies on the topmost peaks for most of the year and the road from Beirut to Damascus is blocked by snow at times in most winters; in the summer the days are hot but the nights are cool enough to drive up to the mountains most of the inhabitants of Beirut. The plateaux and desert have an inland climate with low humidity and higher extremes of heat and cold. Aleppo has greater extremes than Damascus but in both cities there is a distinction between the four seasons: spring from mid-March to mid-May, summer from mid-May to the beginning of October, autumn in October and early November, and winter from November to March.

The People

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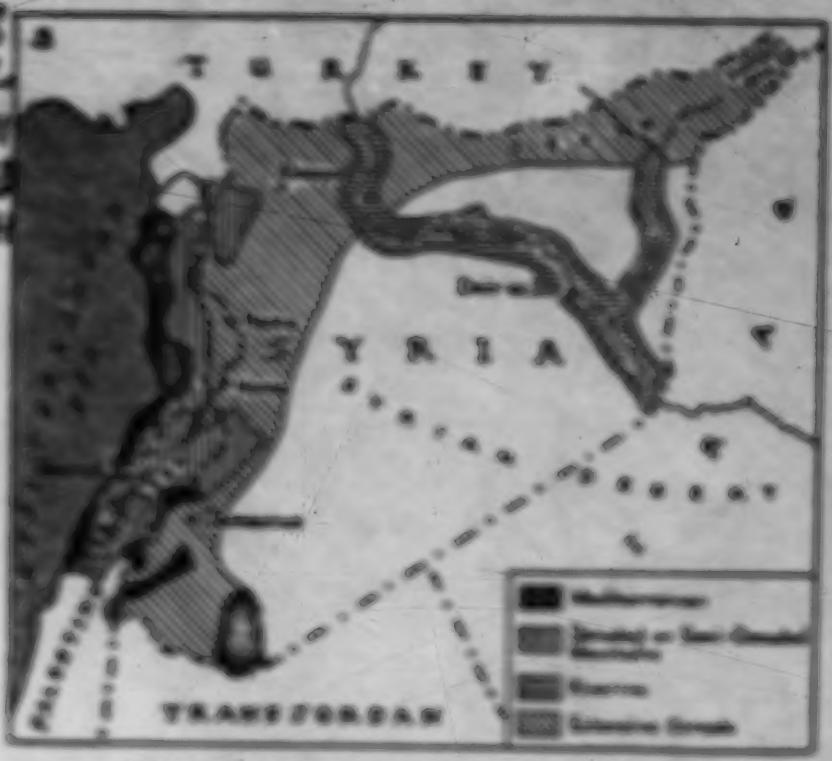
Official statistics showed that in 1951 the populations of Syria and of Lebanon were 3,500,000 and 1,500,000 respectively. Over half the inhabitants are engaged in agriculture, about half a million are nomads, and the rest live in towns. The

[1] See table, below, p. 50.

Lebanon MB1
Syria MB1



SYRIA AND LEBANON: AGRICULTURAL AREAS

GRAIN PRODUCTION IN SYRIA AND LEBANON, 1934-38

	Wheat		Barley		Oats		Corn		Rice		Total	
	Tons	Cwts per acre	Tons	Cwts per acre	Tons	Cwts per acre	Tons	Cwts per acre	Tons	Cwts per acre	Tons	Cwts per acre
[illegible]	[illegible]											
[illegible]	[illegible]											
[illegible]	[illegible]											
[illegible]	[illegible]											
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[illegible]	[illegible]											
[illegible]	[illegible]											
[illegible]	[illegible]											
[illegible]	[illegible]											

With a total rural population of about [illegible] million in 1937-8, the production of grain per head amounts to only [illegible] quintals or [illegible] hundredweights. Thus the problem for Syria is to be-

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CHAPTER V

COTTON IN LEBANON

Lebanon is the smallest, the most cosmopolitan, and one of the most progressive countries in the Middle East. Beirut, the capital, is a modern, pleasant summer resort, whose shops are known over the world. Probably this contact with the world through Beirut explains the strong Western influence in the country.

But Beirut is not Lebanon, and tourism and commerce still are minor aspects of the economy, which still is primarily agricultural. The country as a whole has not modernized as much as the cities. The farmers are much more provincial.

BACKGROUND

The country has limited resources. The total area is less than 4,000 square miles, a third the size of Maryland, and most of it is mountainous. The crop land is limited to the narrow coastal plain which averages only four miles in width, and to the expansive fairly small valleys in the mountains.

Lebanon always has had a great many more people than the agriculture can sustain. In the past this pressure was relieved by emigration, but restrictions of the past 30 years, at home and abroad, have doubled the number and intensified the problem. The population is now about 1.5 million.

Progress has been encouraged by the government which is admirably one of the most stable in the Middle East, despite its lack of experience. Lebanon became an independent Republic only in 1943, after the French mandate was ended. It has been remarkably independent and practical and has not allowed itself to become embroiled in controversies between so many of the other Arab states have.

INDUSTRY

With few exceptions, industries are small and devoted chiefly to the production of light consumers' goods such as textiles, rubber goods, soap, furniture, cigarettes, beer, sandwiches, biscuits, and olive oil. The two chief basic industries are the Iraq Petroleum Company's Tripoli topping plant and the Chekka cement factory. Other basic manufacturing plants include cotton textiles, glass, and wire fertilizer.

AGRICULTURE

Roughly a third of the tilled land is devoted to cereals and the balance to a wide variety of crops—fruit trees, vineyards, vegetables, and a number of industrial crops including cotton. Approximately 50 per cent of this area is left fallow each year.

The eastern plains receive 10 to 20 inches of rainfall a year, and that only during the winter months. Because of the dry summers, a few of the crops

LEBANON NO.1

[redacted]

[redacted]

[redacted]

SYRIA & LEBANON

LATAKIA
LEBANON
PALESTINE

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Lebanon

GEOGRAPHY AND CLIMATE

through Lamlūn province to Syria. The southern half is watered by the Litany River, which, fed by streams from both ranges, runs south and then west, entering the Mediterranean near the ancient town of Tyre. The western slopes of the Lebanon Mountains are covered by the valleys of numerous small rivers which empty into the Mediterranean. The majority are unnamed, but a few are perennial, the most important being the Nahr al-Kabīr, near Tripoli; the Nahr Ibrāhīm; the Nahr al-Kalb and the Nahr Beirut, near Beirut; and the Nahr al-Awwalī, north of Sidon.

The climate varies with the altitude and the proximity to the sea. The coastal belt has an annual rainfall of 25 to 30 inches, with a gradual diminution from north to south. The maximum precipitation occurs in the winter, usually from November to April, while the months from June to September are usually rainless. The duration of the rainless period and the volume of rainfall fluctuate from year to year. The rains are often torrential and concentrated within a few days of each month. A slight increase is encountered on the seaward slopes of the Lebanon range, and the higher [illegible] are covered with snow throughout the winter. The constant breezes from the evaporation-bearing winds from the Mediterranean, however, with the result that the rainfall decreases progressively toward the east. It rarely exceeds 20 to 25 [illegible] a year in the Bekaa, and is appreciably less in the Anti-Lebanon Mountains.

The effect of the altitude is reflected most markedly in the temperatures: they are usually 10° to 15° F. lower in the western mountain villages than along the coast. The

p. 119 (A)

Lebanon MEI

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For information on the topography, climate, agriculture, mineral wealth, railways, settlement pattern, productive capacity of the economy, and trade of the Levant coastland, see MI Middle East, cat. 116, Jr Fisher, pp. 371-434.]